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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER BRITTAIN, JAMES R	
			ART UNIT 3677	PAPER NUMBER

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/735,447

Applicant(s)

SHEPARD ET AL.

Examiner

James R. Brittain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03172006</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restriction***

Claims 19-27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made without traverse in the reply filed on July 15, 2005.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3/2, 4/2, 8/2, 9/8/2, 10/8/2, 11/8/2, 12/8/2, 13/12/8/2, 14, 15/2, 16/15/2 and 17/3/2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation “open areas that are substantially free of fibers of the web” (claim 2, line 6) takes a definite limitation --open areas that are free of fibers of the web-- and renders it indefinite by inserting the term “substantially”. If the open areas are not free of fibers of the web, then applicant provides no basis to determine what would be the scope of the limitation, i.e. how many fibers can be in the “open areas” and fall within the scope of the claim. The specification provides no guidance as to how to unequivocally determine the scope of the limitation “substantially free of fibers” because only open areas free of fibers are described. For instance see [0031], reproduced below, that indicates all the material between the rib areas has been forced into the rib areas, leaving open areas.

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**[0031]** In an alternate embodiment, shown in **FIG. 3**, loop material **20** includes loop domes **12** and rib areas **14**, as discussed above. In this embodiment, however, the connecting rib areas **16'** connect every loop dome to all six adjoining loop domes, and the areas **20** in between the rib areas **14**, **16** are open, rather than planar. In this case, all of the material between the rib areas, both fibers and polymer, has been forced into the rib areas, leaving an open net loop material. This material is lightweight, breathable and may in some cases be stretchable.

The remaining claims are indefinite because they depend on an indefinite claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3/1, 4/1, 5-7, 8/1, 9/8/1, 10/8/1, 11/8/1, 12/8/1, 13/12/8/1, 15/1, 16/15/1 and 17/3/1 are rejected under 35 U.S.C. §103(a) as being unpatentable over either one of Kawanaka et al. (JP 9-3755) or Ito et al. (WO 01/11130), each taken in view of Jackson (US 5699593) and Harwood (US 3047444).

Kawanaka et al. (figures 1, 3) and Ito et al. (figures 1, 2) teach loop material for touch fastening comprising a web of non woven fibrous material defining a plane, the web including: raised areas defined by fibers of the web, the raised areas being elevated above the plane of the web, and defining loops constructed for engagement with male touch fastener elements and planar areas that are substantially in the plane of the web, the planar areas being defined by the web.

The difference is that neither reference includes rib areas surrounding the raised areas to anchor the loops of the raised areas.

However, Jackson (figure 8) teaches a loop material for touch fastening comprising a web of nonwoven fibrous material defining a plane as indicated in col. 5, lines 32-35, wherein nonwoven material and extrusion coated nonwoven material is listed. There are linear raised areas 82, elevated above the plane of the web, defining loops constructed for engagement with male touch fastener elements. The transversely oriented loop material can be pattern bonded 81 by conventional adhesive bonding (col. 6, line 63 - col. 7, line 25) so as to better secure the loop material to the substrate by forming a secondary bonding, so that if the primary bonding used to form the loops becomes unattached, there is a secondary bonding so as to provide better peel performance. The bond pattern forms quadrilaterals with the lines of loop material 82 crossing the bond pattern. Thus, the loop material is surrounded by the quadrilateral bond pattern 81 while anchoring the loop material at the points of intersection between the lines of loop material 82 and bond pattern 81. Since only the loop material covers a small fraction of the web, there are ample areas of the web material not covered by the loop material that is planar (claim 1), open from any loop material and between the bond pattern lines 81. The further difference is that bond pattern is not identified as creating ribs. However, conventional adhesive bonding is evidenced by Harwood (figures 15-17, 34) who teaches loop material comprising a web of nonwoven fibrous material defining a plane, the web including raised areas shown in figure 17, elevated above the plane of the web, defining loops and rib areas 6, 67 surrounding the raised areas to anchor the loops.

As improved peel performance of the loop fasteners of Kawanaka et al. and Ito et al. would be desirable, it would have been obvious to modify the loop fasteners of either so as to have a secondary bonding pattern as taught by Jackson who teaches that it may be sometimes desirable to take a functioning product and add a secondary bonding pattern 81 of conventional adhesive bonding (col. 6, line 63 - col. 7, line 25) crisscrossing the web so as to better secure the loop material to the substrate by forming a secondary bonding, so that if the primary bonding used to form the loops becomes unattached, there is a secondary bonding so as to provide better peel performance and to further form the pattern as ribs would have been obvious Harwood.

As to claim 6, Jackson suggests extrusion coated nonwoven material and one having ordinary skill in the art would realize that a polymeric coating is a standard coating from this teaching.

As to claims 9/8/1 and 10/8/1, the linear loop members 82 of the device of Jackson have a width so as to define narrow domes or have portions at the pattern bonds 81 that define short linear elements that together with the long axial edges of the loop material form polygons and it would be obvious to use such on the domes of the primary references. The choice of rings or ellipses for the pattern bonding would have been obvious in view of Jackson suggesting many different shapes including wave-shaped or random (col. 7, lines 22-25) and applicant has chosen a particular pattern from Jackson's indication of this being a variable that can be adjusted.

Claims 2, 3/2, 4/2, 8/2, 9/8/2, 10/8/2, 11/8/2, 12/8/2, 13/12/8/2, 14, 15/2, 16/15/2 and 17/3/2 are rejected under 35 U.S.C. §103(a) as being unpatentable over Jackson (US 5699593) in view of Harwood (US 3047444).

Jackson (figure 8) teaches a loop material for touch fastening comprising a web of nonwoven fibrous material defining a plane as indicated in col. 5, lines 32-35, wherein nonwoven material and extrusion coated nonwoven material is listed. There are linear raised areas 82, elevated above the plane of the web, defining loops constructed for engagement with male touch fastener elements. The transversely oriented loop material is pattern bonded 81 by conventional adhesive bonding (col. 6, line 63 - col. 7, line 25) so as to better secure the loop material to the substrate. The bond pattern forms quadrilaterals with the lines of loop material 82 crossing the bond pattern. Thus, the loop material is surrounded by the quadrilateral bond pattern 81 while anchoring the loop material at the points of intersection between the lines of loop material 82 and bond pattern 81. Since only the loop material covers a small fraction of the web, there are ample areas of the web material not covered by the loop material that is open from any loop material and between the bond pattern lines 81. The difference is that the bond pattern is not identified as creating ribs and between the rib areas there are no open areas substantially free of fibers of the web. However, conventional adhesive bonding is evidenced by Harwood (figures 15-17, 20, 34) who teaches loop material comprising a web of nonwoven fibrous material defining a plane, the web including raised areas shown in figure 17, elevated above the plane of the web, defining loops and rib areas 6, 67 surrounding the raised areas to anchor the loops and further that it is conventional to form a loop material in the form of a net as shown in figure 20 with apertures in the web so as to provide porosity in those situations where desirable as indicated in col. 12, lines 23-53. It would have been obvious to modify Jackson to utilize the conventional adhesive ribs taught by Harwood to secure the loops in view of Jackson teaching that conventional adhesive pattern bonding can be used and Harwood is an example of such

pattern bonding and to further generate open areas in the web of Jackson in view of Harwood suggesting a "net-like pattern" to be desirable for those situations where porosity is desirable as compared to a non-woven web lacking openings.

As to claims 9/8/2 and 10/8/2, the linear loop members 82 have a width so as to define narrow domes or have portions at the pattern bonds 81 that define short linear elements that together with the long axial edges of the loop material form polygons. The choice of rings or ellipses for the pattern bonding would have been obvious in view of Jackson suggesting many different shapes including wave-shaped or random (col. 7, lines 22-25) and applicant has chosen a particular pattern from Jackson's indication of this being a variable that can be adjusted.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (US 5699593) in view of King et al. (US 5595567).

Jackson (figure 8) teaches a loop material for touch fastening comprising a web on nonwoven fibrous material defining a plane as indicated in col. 5, lines 32-35, wherein nonwoven material and extrusion coated nonwoven material is listed. There are linear raised areas 82, elevated above the plane of the web, defining loops constructed for engagement with male touch fastener elements. The transversely oriented loop material is pattern bonded 81 by conventional adhesive bonding (col. 6, line 63 - col. 7, line 25) so as to better secure the loop material to the substrate. The bond pattern forms quadrilaterals with the lines of loop material 82 crossing the bond pattern. Thus, the loop material is surrounded by the quadrilateral bond pattern 81 while anchoring the loop material at the points of intersection between the lines of loop material 82 and bond pattern 81. Since only the loop material covers a small fraction of the web, there are ample areas of the web material not covered by the loop material that is open from



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any loop material and between the bond pattern lines 81. The difference is that the bond pattern is not identified as creating ribs wherein the ribs comprise fused fibers of the nonwoven web. However, King et al. (figures 5-7, 10) defines the use of linear bonding regions forming raised regions as shown in figure 10 and the indication that the bonding regions can be linear and of many different shapes and made by many different processes including adhesive and ultrasonics, heating, etc. As King et al. suggests that the raised regions as shown in figure 10 need not be created by adhesive, but that alternatively the pinning of the fibers can be accomplished by using the filament material, it would have been obvious to modify the structure of Jackson to utilize the raised bonded regions made of the filament material taught by King et al.

### ***Response to Arguments***

Applicant's arguments filed June 19, 2006 have been fully considered but they are not persuasive. Applicant's argument with respect to the additions to claim 1 are not met by the primary references and noting that Jackson suggests utilizing a secondary bonding structure on a functioning product by pattern bonding in a crisscross manner and this teaching of adding a secondary bonding to enhance peel strength performance is applicable to the new primary references. As to claim 2, while applicant indicates the lace-like network would make it difficult to securely adhere the yarns to the backing material, there is no reason to consider it to be impossible since each suggests using adhesive.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Brittain whose telephone number is (571) 272-7065. The examiner can normally be reached on M-F 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James R. Brittain  
Primary Examiner  
Art Unit 3677